

Mr. Richard Florea  
Dutchmen Manufacturing, Inc.  
305 Steury Avenue  
Goshen, IN 46526

Re: **039-11751**  
**First Minor Revision to**  
**FESOP 039-11273-00376**

Dear Mr. Florea:

Dutchmen Manufacturing, Inc. was issued a permit on December 6, 1999 for a travel trailer production source. A letter requesting changes to this permit was received on January 4, 2000. Pursuant to the provisions of 326 IAC 2-8-11.1 a **minor** permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The revision consists of the addition of the Zephyr light travel trailer production line.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions  
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Mark L. Kramer, c/o OAM, 100 North Senate

Dutchmen Manufacturing, Inc.  
Elkhart, Indiana

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Permit Revision 039-11751-00376

Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

Attachments

MLK/MES

cc: File - Elkhart County  
U.S. EPA, Region V  
Elkhart County Health Department  
Northern Regional Office  
Air Compliance Section Inspector - Paul Karkiewicz  
Compliance Data Section - Mendy Jones  
Administrative and Development - Janet Mobley  
Technical Support and Modeling - Michele Boner

**FEDERALLY ENFORCEABLE STATE  
OPERATING PERMIT (FESOP)  
and NEW SOURCE REVIEW  
OFFICE OF AIR MANAGEMENT**

**Dutchmen Manufacturing, Inc.  
17705 County Road 38  
Goshen, Indiana 46526**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F039-11273-00376	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: December 6, 1999
First Minor Permit Revision: MPR 039-11751	Pages Affected: 4, 6, 6a, 34a, 34b and 34c.
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

**Compliance Determination Requirements**

D.2.2 Testing Requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]

**SECTION D.3 FACILITY OPERATION CONDITIONS**

**Zephyr Light Travel Trailer Production Line**

**Emission Limitations and Standards [326 IAC 2-8-4(1)]**

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

D.3.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]

D.3.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

D.3.5 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

D.3.6 Volatile Organic Compounds (VOC)

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

D.3.7 Record Keeping Requirements

**Certification Form**

**Emergency/Deviation Form**

**Quarterly Report Forms**

**Quarterly Compliance Monitoring Report Form**

### **305 Steury Avenue - GL and Middlebury Lite Final Finish Lines**

GL Line has a capacity of 1.75 travel trailers per hour and Middlebury Lite Line has a capacity of 2.25 travel trailers per hour. These final finish lines, include the following equipment and processes, which are use by both lines:

- (1) Final assembly and final finish area, which is equipped with one (1) table saw, seven (7) mitre saws, one (1) saw, two (2) drill presses, five (5) bradly guns, three (3) double mitres, one (1) double drill, and three (3) chopsaws.
- (b) Thor Indiana, Inc. - State Road 15 North and Stoutco Drive, Bristol, Indiana:

### **Signature Travel Trailer Production Line**

Signature Travel Trailer Production Line, includes chassis and floors preparation; lamination, which is capable of producing 0.75 travel trailer per hour. This line also include the following:

- (1) Cabinet and woodworking operations; and slide-out assembly and installations and final finish operation. The PM emissions from the woodworking operation is controlled by dust collector, P1.
- (c) Dutchmen Manufacturing, Inc. - 17705 County Road 38, Goshen, Indiana
  - (1) One (1) painting area where travel trailers' cabinets, walls, prefinished and assembled campers are coated using aerosol cans, with a capacity of 1.125 units per hour. There are no exhaust stack; and
  - (2) Woodworking operation, with a maximum throughput of 828.966 pounds per hour, luan is 131.170 pounds per hour and plywood is 524.565 pounds per hour. This operation consists of the following equipment:
    - (a) Nine (9) chop saw
    - (b) Two (2) table saws
    - (c) One (1) belt sander
    - (d) One (1) router
    - (e) One (1) band saw
    - (f) One (1) drill press
    - (g) Two (2) radial arm saws
    - (h) One (1) grinder
    - (i) One (1) plasma cutter
    - (j) One (1) baghouse
    - (k) One (1) cyclone
- (d) **One (1) Zephyr light travel trailer production line consisting of:**
  - (1) One (1) cabinet and mills hand and spray application area, capacity: 0.50 travel trailers per hour.

- (2) One (1) unit assembly hand and spray application area, capacity: 0.50 travel trailers per hour.
- (3) One (1) final finished hand, wipe and spray application area, capacity: 0.50 travel trailers per hour.
- (4) One (1) woodworking operation consisting of one (1) band saw, three (3) chop saws, one (1) radial arm saw, one (1) pin router, one (1) sander oscillator edge and two (2) table saws, equipped with two (2) baghouses, known as P3 and P4 for PM control, capacity: 586 pounds of wood per hour total. (Baghouses P3 and P4 do not have to be operated at all times.)

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

## SECTION D.3

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

(d) **One (1) Zephyr light travel trailer production line consisting of:**

- (1) One (1) cabinet and mills hand and spray application area, capacity: 0.50 travel trailers per hour.
- (2) One (1) unit assembly hand and spray application area, capacity: 0.50 travel trailers per hour.
- (3) One (1) final finished hand, wipe and spray application area, capacity: 0.50 travel trailers per hour.
- (4) One (1) woodworking operation consisting of one (1) band saw, three (3) chop saws, one (1) radial arm saw, one (1) pin router, one (1) sander oscillator edge and two (2) table saws, equipped with two (2) baghouses, known as P3 and P4 for PM control, capacity: 586 pounds of wood per hour total. (Baghouses P3 and P4 do not have to be operated at all times.)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-5(1)]

#### D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the Zephyr light travel trailer production line shall utilize one of the following application methods:

Airless Spray Application  
Air Assisted Airless Spray Application  
Electrostatic Spray Application  
Electrostatic Bell or Disc Application  
Heated Airless Spray Application  
Roller Coating  
Brush or Wipe Application  
Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

**D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]**

Any change or modification that may increase the actual VOC emissions to fifteen (15) pounds per day or more from the Zephyr light travel trailer production line when coating the metal parts of the trailer shall require prior IDEM, OAM approval before such change may occur.

**D.3.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]**

Any change or modification that may increase the actual VOC emissions to twenty five (25) tons per year or more from the Zephyr light travel trailer production line shall require prior IDEM, OAM approval before such change may occur.

**D.3.4 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

- (a) The PM from the Zephyr light travel trailer production light shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour

- (b) The allowable particulate matter (PM) emission rate from the woodworking operations associated with baghouses P3 and P4 shall not exceed 0.979 and 1.28 pounds per hour, respectively, when operating at process weight rates of 236 and 350 pounds per hour (0.118 and 0.175 tons per hour). The allowable PM emission rate is calculated with the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and

P = process weight rate in tons per hour

The baghouses do not have to be in operation at all times in order to comply with these allowable PM emission rates.

**D.3.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required the hand, wipe and spray surface coating operations of the Zephyr light travel trailer production line.

**Compliance Determination Requirements [326 IAC 2-8-5(a)(1)&(4)] [326 IAC 2-1.1-11]**

**D.3.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]**

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limits specified in Condition D.3.4 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.



#### D.3.7 Volatile Organic Compounds (VOC)

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Compliance with the VOC usage limitations contained in Conditions D.3.2 and D.3.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

### **Record Keeping and Reporting Requirements [326 IAC 2-8-5(3)] [326 IAC 2-8-19]**

#### D.3.8 Record Keeping Requirements

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- (a) To document compliance with Conditions D.3.2 and D.3.3 the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits established in Conditions D.3.2 and D.3.3.
  - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The total VOC usage for each day; and
  - (4) The weight of VOCs emitted for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## **Indiana Department of Environmental Management Office of Air Management**

### **Technical Support Document (TSD) for a Permit Revision to a Federally Enforceable State Operating Permit**

#### **Source Background and Description**

<b>Source Name:</b>	<b>Dutchmen Manufacturing, Inc.</b>
<b>Source Location:</b>	<b>17705 County Road 38, Goshen, Indiana 46526</b>
<b>County:</b>	<b>Elkhart</b>
<b>SIC Code:</b>	<b>3792</b>
<b>Operation Permit No.:</b>	<b>F 039-11273-00376</b>
<b>Operation Permit Issuance Date:</b>	<b>December 6, 1999</b>
<b>Minor Permit Revision No.:</b>	<b>MPR 039-11751-00376</b>
<b>Permit Reviewer:</b>	<b>Mark L. Kramer</b>

The Office of Air Management (OAM) has reviewed a revision application from Dutchmen Manufacturing, Inc. relating to the operation of travel trailer production source. This revision consists of the following equipment:

One (1) Zephyr light travel trailer production line consisting of:

- (a) One (1) cabinet and mills hand and spray application area, capacity: 0.50 travel trailers per hour.
- (b) One (1) unit assembly hand and spray application area, capacity: 0.50 travel trailers per hour.
- (c) One (1) final finished hand, wipe and spray application area, capacity: 0.50 travel trailers per hour.
- (d) One (1) woodworking operation consisting of one (1) band saw, three (3) chop saws, one (1) radial arm saw, one (1) pin router, one (1) sander oscillator edge and two (2) table saws, equipped with two (2) baghouses, known as P3 and P4 for PM control, capacity: 586 pounds of wood per hour total. (Baghouses P3 and P4 do not have to be operated at all times.)

#### **History**

On January 4, 2000, Dutchmen Manufacturing, Inc. submitted an application to the OAM requesting to construct and operate the addition of a light travel trailer production line to their existing plant. Dutchmen Manufacturing, Inc. was issued a FESOP on December 6, 1999.

#### **Existing Approvals**

The source was issued a Federally Enforceable State Operating Permit F 039-11273-00376 on December 6, 1999. The source has not received any subsequent revisions or administrative amendments.

### Enforcement Issue

- (a) IDEM is aware that equipment has been constructed prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

### Stack Summary

All emissions from the proposed revision are fugitive.

### Recommendation

The staff recommends to the Commissioner that the Minor Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on January 4, 2000.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations on pages 1 through 3 of 3.

### Potential To Emit Of This Revision

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.” This table reflects the PTE before controls.

Pollutant	Potential To Emit (tons/year)
PM	4.63
PM <sub>10</sub>	4.63
SO <sub>2</sub>	0.00
VOC	19.6
CO	0.00
NO <sub>x</sub>	0.00

HAPs	Potential To Emit (tons/year)
Xylene	0.129
Toluene	0.773
Formaldehyde	3.60
Benzene	0.016
Hexane	0.260
Glycol Ethers	0.003
Methanol	0.002
TOTAL	4.78

#### Justification for Revision

The FESOP is being revised through a FESOP Minor Permit Revision. This revision is being performed pursuant to 326 IAC 2-8-11.1(d)(4)(D). This permit revision is minor because the potential-to-emit VOC emissions from the addition of light travel trailer production line exceeds ten (10) tons per year, but is less than twenty-five (25) tons per year.

#### County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone.

#### Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited in the existing FESOP):

Pollutant	Emissions (tons/year)
PM	3.68
PM <sub>10</sub>	3.69
SO <sub>2</sub>	0.005
VOC	< 100
CO	0.736
NO <sub>x</sub>	0.876

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the Technical Support Document for F 039-11273-00376, issued December 6, 1999.

#### Potential to Emit of Revision After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the revision after controls.

	Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Light travel trailer Production Line	4.63	4.63	0.00	19.6	0.00	0.00	4.78
PSD Threshold Level	250	250	250	250	250	250	-

This revision to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

#### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart JJ since the source is limited below major source levels of ten (10) and twenty-five (25) tons per year for a single and combination of HAPs, respectively.

### **State Rule Applicability - Entire Source**

#### **326 IAC 1-6-3 (Preventive Maintenance Plan)**

- (a) The source is required to submit a Preventive Maintenance Plan (PMP) for the surface coating operation because VOC and HAPs emissions are limited to avoid the requirements of 326 IAC 2-7.
- (b) A Preventive Maintenance Plan is not required for the woodworking operations because:
  - (1) There are control devices for these facilities, and
  - (2) The allowable PM emissions are less than ten (10) pounds per hour.

#### **326 IAC 2-6 (Emission Reporting)**

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year for Elkhart County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year).

#### **326 IAC 2-8-4 (FESOP)**

Pursuant to this rule, the amount of PM<sub>10</sub> and VOC shall be limited to less than one hundred (100) tons per year from the entire source. In addition, the amount of a single HAP shall be limited to less than ten (10) tons per year and the combination of all HAPs shall be limited to less than twenty-five (25) tons per year from the entire source. Therefore, the requirements of 326 IAC 2-7, do not apply to the source. No additional emission limits are necessary on the Zephyr light travel trailer production line since the source will still comply with the requirements of this rule.

#### **326 IAC 5-1 (Opacity Emissions Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### **State Rule Applicability - Individual Facilities**

#### **326 IAC 2-1-3.4 (Construction and operating permit requirements: new source toxics control)**

Since the source with the proposed addition will not emit a single hazardous air pollutant (HAP) at ten (10) tons per year or greater, or emit a combination of HAPs at twenty-five (25) tons per year or greater, the proposed light travel trailer line is not subject to the requirements of this rule.

326 IAC 8-1-6 (New facilities: general reduction requirements)

This rule may apply to new facilities as of January 1, 1980. Since the potential VOC emissions from the proposed light travel trailer production line coating fiberglass and plastic substrates are less than twenty-five (25) tons per year, 326 IAC 8-1-6 does not apply to this revision.

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)

The light travel trailer production line; is not subject to this rules because potential VOC emissions for coating metal are less than fifteen (15) pounds per day. See page 1 of 3 TSD Appendix A for detailed calculations.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

The light travel trailer production line is subject to 326 IAC 8-2-12 (Surface Coating Emission Limitation-Wood Furniture and Cabinet Coating), because the proposed line will have actual VOC emissions greater than fifteen (15) pounds per day. See page 1 of 3 of TSD Appendix A for detailed calculations for coating wood substrates.

Pursuant to this rule, the surface coating applied to wood furniture and cabinets shall utilize one of the following application methods:

- Airless Spray Application
- Air Assisted Airless Spray Application
- Electrostatic Spray Application
- Electrostatic Bell or Disc Application
- Heated Airless Spray Application
- Roller Coating
- Brush or Wipe Application
- Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

This proposed line will be in compliance, because all the methods used (hand/wipe application, roll coating and aerosol can coating which is equivalent to airless spray system) are among those listed in the rule.

326 IAC 6-3-2 (Process Operations)

- (a) The PM overspray emissions from the light travel trailer production line are subject to 326 IAC 6-3-2 and shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) The allowable particulate matter (PM) emission rate from the woodworking operations associated with baghouses P3 and P4 shall not exceed 0.979 and 1.28 pounds per hour, respectively, when operating at process weight rates of 236 and 350 pounds per hour (0.118 and 0.175 tons per hour). The allowable PM emission rate is calculated with the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The baghouses do not have to be in operation at all times in order to comply with these limits since the potential to emit before control for each baghouse of 0.500 which is less than the allowable PM emission rates of 0.979 and 1.28 pounds per hour.

### Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this revision for the surface coating operations are as follows:

The source-wide VOC, single HAP, and combined HAPs emissions are limited to less than one hundred (100) tons per year, to less than ten (10) tons per year and to less than twenty-five (25) tons per year, respectively. Therefore, the amount of VOC and HAPs delivered to the applicators, including cleanup solvents must be monitored and recorded on a monthly basis.

These monitoring conditions are necessary in order to comply with 326 IAC 2-8 (FESOP).

### Proposed Changes

The permit language is changes to read as follows with new language appearing in **bold**:

#### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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- (d) **One (1) Zephyr light travel trailer production line consisting of:**

- (1) **One (1) cabinet and mills hand and spray application area, capacity: 0.50 travel trailers per hour.**



- (2) One (1) unit assembly hand and spray application area, capacity: 0.50 travel trailers per hour.
- (3) One (1) final finished hand, wipe and spray application area, capacity: 0.50 travel trailers per hour.
- (4) One (1) woodworking operation consisting of one (1) band saw, three (3) chop saws, one (1) radial arm saw, one (1) pin router, one (1) sander oscillator edge and two (2) table saws, equipped with two (2) baghouses, known as P3 and P4 for PM control, capacity: 586 pounds of wood per hour total. (Baghouses P3 and P4 do not have to be operated at all times.)

**SECTION D.3 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-8-4(10)]:**

- (d) One (1) Zephyr light travel trailer production line consisting of:
- (1) One (1) cabinet and mills hand and spray application area, capacity: 0.50 travel trailers per hour.
  - (2) One (1) unit assembly hand and spray application area, capacity: 0.50 travel trailers per hour.
  - (3) One (1) final finished hand, wipe and spray application area, capacity: 0.50 travel trailers per hour.
  - (4) One (1) woodworking operation consisting of one (1) band saw, three (3) chop saws, one (1) radial arm saw, one (1) pin router, one (1) sander oscillator edge and two (2) table saws, equipped with two (2) baghouses, known as P3 and P4 for PM control, capacity: 586 pounds of wood per hour total. (Baghouses P3 and P4 do not have to be operated at all times.)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-8-5(1)]**

**D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]**

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and cabinets in the Zephyr light travel trailer production line shall utilize one of the following application methods:

Airless Spray Application  
Air Assisted Airless Spray Application  
Electrostatic Spray Application  
Electrostatic Bell or Disc Application  
Heated Airless Spray Application  
Roller Coating  
Brush or Wipe Application  
Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

**D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]**

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Any change or modification that may increase the actual VOC emissions to fifteen (15) pounds per day or more from the Zephyr light travel trailer production line when coating the metal parts of the trailer shall require prior IDEM, OAM approval before such change may occur.

**D.3.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]**

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Any change or modification that may increase the actual VOC emissions to twenty five (25) tons per year or more from the Zephyr light travel trailer production line shall require prior IDEM, OAM approval before such change may occur.

**D.3.4 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

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- (a) The PM from the Zephyr light travel trailer production light shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

- (b) The allowable particulate matter (PM) emission rate from the woodworking operations associated with baghouses P3 and P4 shall not exceed 0.979 and 1.28 pounds per hour, respectively, when operating at process weight rates of 236 and 350 pounds per hour (0.118 and 0.175 tons per hour). The allowable PM emission rate is calculated with the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where E = rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The baghouses do not have to be in operation at all times in order to comply with these allowable PM emission rates.

**D.3.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required the hand, wipe and spray surface coating operations of the Zephyr light travel trailer production line.

**Compliance Determination Requirements [326 IAC 2-8-5(a)(1)&(4)] [326 IAC 2-1.1-11]**

**D.3.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]**

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limits specified in Condition D.3.4 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**D.3.7 Volatile Organic Compounds (VOC)**

Compliance with the VOC usage limitations contained in Conditions D.3.2 and D.3.3 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**Record Keeping and Reporting Requirements [326 IAC 2-8-5(3)] [326 IAC 2-8-19]**

**D.3.8 Record Keeping Requirements**

- (a) To document compliance with Conditions D.3.2 and D.3.3 the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits established in Conditions D.3.2 and D.3.3.
  - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The total VOC usage for each day; and
  - (4) The weight of VOCs emitted for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

- (a) This source and revision will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See attached calculations for detailed air toxic calculations in Appendix A page 2 of 3

## **Conclusion**

The operation of this light travel trailer production line shall be subject to the conditions of the attached proposed FESOP Minor Permit Revision No. 039-11751-00376.

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

**Company Dutchmen Manufacturing, Inc.  
Address Ci 17705 County Road 38, Goshen, Indiana 46526  
Permit Rev MPR 039-11751  
Plt ID: 039-00376  
Reviewer: Mark L. Kramer  
Date: January 4, 2000**

Material	Density (lbs/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour )	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency	Substrate
<b>Cabinet and Mill</b>																	
Mobilbond MB 34	9.49	60.00%	0.0%	60.0%	0.0%	40.00%	0.22070	0.500	5.69	5.69	0.63	15.08	2.75	0.00	14.24	100%	wood
Econotac adhesive - #26	6.50	80.00%	0.0%	80.0%	0.0%	20.00%	0.02070	0.500	5.20	5.20	0.05	1.29	0.24	0.03	26.00	50%	wood
Cyclo silicone C-33	5.92	92.50%	7.5%	85.0%	5.34%	0.00%	0.00060	0.500	5.32	5.03	0.002	0.04	0.01	0.00	n/a	50%	wood
Enerbond SF (Ener 45)	10.01	0.00%	0.0%	0.0%	0.0%	100.00%	0.00980	0.500	0.00	0.00	0.00	0.00	0.00	0.11	0.00	50%	wood
IPS Weld-On Cement (#771)	7.25	73.50%	0.0%	73.5%	0.0%	30.00%	0.03080	0.500	5.33	5.33	0.08	1.97	0.36	0.00	17.76	100%	wood
<b>Unit Assembly</b>																	
Self-leveling sealant 502	11.30	31.00%	0.0%	31.0%	0.0%	61.00%	0.70000	0.500	3.50	3.50	1.23	29.43	5.37	0.00	5.74	100%	wood/vinyl
Geocel 2300 sealant	7.92	35.00%	0.0%	35.0%	0.0%	61.00%	0.05830	0.500	2.77	2.77	0.08	1.94	0.35	0.00	4.54	100%	wood
901 BA adhesiveChroma base clear (touch-up)	8.40	44.00%	0.0%	44.0%	0.0%	55.00%	1.05000	0.500	3.70	3.70	1.94	46.57	8.50	0.00	6.72	100%	wood
Chroma base clear (touch-up)	7.17	35.00%	2.0%	33.0%	1.9%	2.74%	0.00350	0.500	2.41	2.37	0.00	0.10	0.02	0.02	86.35	50%	wood/fiberglass
Chroma One binder (touch-up)	7.10	100.00%	0.0%	100.0%	0.0%	0.00%	0.00350	0.500	7.10	7.10	0.01	0.30	0.05	0.00	n/a	50%	wood/fiberglass
Oatey cleaner (30766)	6.60	95.00%	0.0%	95.0%	0.0%	0.00%	0.03080	0.500	6.27	6.27	0.10	2.32	0.42	0.00	n/a	100%	fiberglass
Parts & Brake Clean (C-111)	6.30	99.60%	36.0%	63.6%	34.3%	0.00%	0.00600	0.500	6.10	4.01	0.01	0.29	0.05	0.00	n/a	50%	metal
Dupont lacquer thinner	6.32	100.00%	0.0%	100.0%	0.0%	0.00%	0.00350	0.500	6.32	6.32	0.01	0.27	0.05	0.00	n/a	100%	fiberglass
Mineral spirits	6.59	100.00%	0.0%	100.0%	0.0%	0.00%	0.00350	0.500	6.59	6.59	0.01	0.28	0.05	0.00	n/a	100%	fiberglass
<b>Final Finish</b>																	
Geocel 2300 sealant	7.92	35.00%	0.0%	35.0%	0.0%	61.00%	0.03970	0.500	2.77	2.77	0.06	1.32	0.24	0.00	4.54	100%	wood
Geocel 2000 sealant	8.34	33.50%	15.0%	18.5%	0.0%	66.50%	0.00560	0.500	1.54	1.54	0.00	0.10	0.02	0.00	2.32	100%	wood
Bostik Supertak adhesive (15	5.60	90.00%	0.0%	90.0%	0.0%	10.00%	0.03190	0.500	5.04	5.04	0.08	1.93	0.35	0.02	50.40	50%	wood
Tite R Bond glue (GL 2287)	7.42	98.20%	0.0%	98.2%	0.0%	1.50%	0.00070	0.500	7.29	7.29	0.00	0.06	0.01	0.00	485.76	100%	wood
Touch N'Tone enamel (touch-up) (55721)	5.59	65.00%	0.0%	65.0%	0.0%	13.11%	0.03540	0.500	3.63	3.63	0.06	1.54	0.28	0.08	27.72	50%	fiberglass
Cyclo silicone C-33	5.92	92.50%	7.5%	85.0%	5.3%	0.00%	0.00010	0.500	5.32	5.03	0.00	0.01	0.00	0.00	n/a	50%	metal
1" AYD vinyl leather cleaner #	8.30	93.00%	85.0%	8.0%	85.0%	0.00%	0.04940	0.500	4.43	0.66	0.02	0.39	0.07	0.00	n/a	100%	plastic
Parts & Brake clean (C-111)	6.30	99.60%	36.0%	63.6%	34.3%	0.00%	0.00600	0.500	6.10	4.01	0.01	0.29	0.05	0.00	n/a	50%	fiberglass
Glass cleaner #40A	8.30	99.00%	91.0%	8.0%	91.0%	1.00%	0.01440	0.500	7.38	0.66	0.00	0.11	0.02	0.00	66.40	50%	fiberglass
Lacquer thinner (39395)	6.32	100.00%	0.0%	100.0%	0.0%	0.00%	0.00700	0.500	6.32	6.32	0.02	0.53	0.10	0.00	n/a	100%	fiberglass
Mineral spirits	6.59	100.00%	0.0%	100.0%	0.0%	0.00%	0.01400	0.500	6.59	6.59	0.05	1.11	0.20	0.00	n/a	100%	fiberglass

<b>State Potential Emissions</b>	<b>Add worst case coating to all solvents</b>	<b>VOC &amp; PM</b>	<b>Control Efficiency</b>	<b>0.00%</b>	<b>4.47</b>	<b>107.26</b>	<b>19.57</b>	<b>0.25</b>
			<b>Uncontrolled</b>		<b>4.47</b>	<b>107.26</b>	<b>19.57</b>	<b>0.25</b>
			<b>Controlled</b>					

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) \* Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lbs/gal) \* Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used

**Appendix A: Emission Calculations**  
**HAP Emission Calculations**

**Company Dutchmen Manufacturing, Inc.**  
**Address C 17705 County Road 38, Goshen, Indiana 46526**  
**Permit Re: MPR 039-11751**  
**Plt ID: 039-00376**  
**Reviewer: Mark L. Kramer**  
**Date: January 4, 2000**

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % MDI	Weight % MEK	Weight % Toluene	Weight % Xylene	Weight % Hexane	Weight % Cumene	Weight % Methanol	Xylene Emission s (tons/yr)	Toluene Emissions (tons/yr)	Formaldeh yde Emissions (tons/yr)	Benzene Emission s (tons/yr)	Hexane Emission s (tons/yr)	Glycol Ethers Emissions (tons/yr)	Methanol Emissions (tons/yr)
Mobilbond MB 34	9.49	0.22070	0.500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Econotac adhesive - #26	6.50	0.02070	0.500	0.00%	0.00%	0.00%	0.00%	35.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Cyclo silicone C-33	5.92	0.00060	0.500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enerbond SF (Ener 45)	10.01	0.00980	0.500	60.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.13	0.00	0.00	0.00	0.00	0.00	0.00
IPS Weld-On Cement (#771)	7.25	0.03080	0.500	0.00%	65.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.32	0.00	0.00	0.00	0.00	0.00
Self-leveling sealant 502	11.30	0.70000	0.500	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	3.46	0.00	0.00	0.00	0.00
Geocel 2300 sealant	7.92	0.05830	0.500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
901 BA adhesiveChroma base clear (touch-up)	8.40	1.05000	0.500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chroma base clear (touch-up)	7.17	0.00350	0.500	0.00%	28.00%	28.00%	16.00%	0.00%	0.00%	0.00%	0.00	0.02	0.02	0.01	0.00	0.00	0.00
Chroma One binder (touch-up)	7.10	0.00350	0.500	0.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Oatey cleaner (30766)	6.60	0.03080	0.500	0.00%	95.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.42	0.00	0.00	0.00	0.00	0.00
Parts & Brake Clean (C-111)	6.30	0.00600	0.500	0.00%	0.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Dupont lacquer thinner	6.32	0.00350	0.500	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mineral spirits	6.59	0.00350	0.500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Geocel 2300 sealant	7.92	0.03970	0.500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Geocel 2000 sealant	8.34	0.00560	0.500	0.00%	0.00%	0.00%	7.00%	0.00%	3.00%	0.00%	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Bostik Supertak adhesive (1)	5.60	0.03190	0.500	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.16	0.00	0.00
Tite R Bond glue (GL 2287)	7.42	0.00070	0.500	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Touch N'Tone enamel (touch-up) (55721)	5.59	0.03540	0.500	0.00%	0.00%	15.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.07	0.00	0.00	0.00	0.00
Cyclo silicone C-33	5.92	0.00010	0.500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1" AYD vinyl leather cleaner	8.30	0.04940	0.500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parts & Brake clean (C-111)	6.30	0.00600	0.500	0.00%	0.00%	30.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Glass cleaner #40A	8.30	0.01440	0.500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.80%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lacquer thinner (39395)	6.32	0.00700	0.500	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mineral spirits	6.59	0.01400	0.500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total State Potential Emissions

**0.129      0.773      3.598      0.016      0.260      0.003      0.002**

**METHODOLOGY**

HAPS emission rate (tons/yr) = Density (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emission Calculations  
Baghouse Operations**

Page 3 of 3 TSD App A

**Company Name: Dutchmen Manufacturing, Inc.**  
**Address City IN Zip: 17705 County Road 38, Goshen, Indiana 46526**  
**Permit Revision No.: MPR 039-11751**  
**Plt ID: 039-00376**  
**Reviewer: Mark L. Kramer**  
**Date: January 4, 2000**

Unit ID	Control Efficiency (%)	Grain Loading per Act Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Control (lb/hr)	Emission Rate before Control (tons/yr)	Emission Rate after Control (lb/hr)	Emission Rate after Control (tons/yr)
P3	99.0%	0.0004860	1200.0	0.500	2.19	0.005	0.022
P4	99.0%	0.0004860	1200.0	0.500	2.19	0.005	0.022
<b>Total</b>				<b>1.00</b>	<b>4.38</b>	<b>0.010</b>	<b>0.044</b>

**Methodology**

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

**Allowable Rate of Emissions**

	Process Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)	Allowable Emissions (tons/yr)
P3	236	0.118	0.979	4.29
P4	350	0.175	1.28	5.59

**Methodology**

Allowable Emissions = 4.10(Process Weight Rate)<sup>0.67</sup>